

# INTEGRATED SOI FINGERED DECOUPLING CAPACITOR

## Abstract

The invention provides a fingered decoupling capacitor in the bulk silicon region that are formed by etching a series of minimum or sub-minimum trenches in the bulk silicon region, oxidizing these trenches, removing the oxide from at least one or more disjoint trenches, filling all the trenches with either in-situ doped polysilicon, intrinsic polysilicon that is later doped through ion implantation, or filling with a metal stud, such as tungsten and forming standard interconnects to the capacitor plates.